



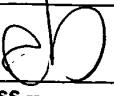
UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,765	12/26/2001	Hong Man Moon	8733.514.00	5858
30827	7590	04/23/2004	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006				NGUYEN, HOAN C
		ART UNIT		PAPER NUMBER
		2871		

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/025,765	MOON, HONG MAN 	
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --			
Period for Reply			
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.			
<ul style="list-style-type: none"> - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). <p>Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</p>			
Status			
1) <input type="checkbox"/> Responsive to communication(s) filed on <u>1/28/04</u> . 2a) <input type="checkbox"/> This action is FINAL. 2b) <input checked="" type="checkbox"/> This action is non-final. 3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.			
Disposition of Claims			
4) <input checked="" type="checkbox"/> Claim(s) <u>1-3,5-7,9-12,14-26,28 and 29</u> is/are pending in the application. 4a) Of the above claim(s) <u>4,8,13 and 27</u> is/are withdrawn from consideration. 5) <input type="checkbox"/> Claim(s) _____ is/are allowed. 6) <input checked="" type="checkbox"/> Claim(s) <u>1-3,5-7,9-12,14-26 and 28-29</u> is/are rejected. 7) <input type="checkbox"/> Claim(s) _____ is/are objected to. 8) <input type="checkbox"/> Claim(s) _____ are subject to restriction and/or election requirement.			
Application Papers			
9) <input type="checkbox"/> The specification is objected to by the Examiner. 10) <input type="checkbox"/> The drawing(s) filed on _____ is/are: a) <input type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) <input type="checkbox"/> The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.			
Priority under 35 U.S.C. § 119			
12) <input type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) <input type="checkbox"/> All b) <input type="checkbox"/> Some * c) <input type="checkbox"/> None of: 1. <input type="checkbox"/> Certified copies of the priority documents have been received. 2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____. 3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received.			
Attachment(s)			
1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.		4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____.	

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 24 Jan. 2004 has been entered.

Response to Amendment

Applicant's arguments with respect to Amended claims 1, 5, 9, 11, 14, 24 and 26 have been considered but are moot in view of the new ground(s) of rejection.

In amendment filed on 18 Nov. 2003, applicant admitted that the preference of Kim (US10/025765) and the instant application made and owned by LG. Philips LCD, Ltd. at the time of the invention of the present application. Therefore this reference cannot be applied for 103-rejection.

Applicant cancelled claims 4, 8, 13 and 27.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 3, 7, 11-12 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, the dependent claims 3, 7, 11-12 and 26 recite the broader limitation "the passivation layer are an organic film", and the independent claims 1, 5, 9 and 24 also recite the narrower limitation "the passivation layer include BenzoCycloButene (BCB)". **The boarder claims cannot depend on the narrower claims.**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 5-7, 9-11, 14-15, 23-26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekimura (US4505547) in view of Kennedy et al. (US5246782A).

In regard to claims 1-2, 5-6, 9-10, 23-26 and 29, Sekimura teaches (Figs. 1-2) LCD device comprising:

- first and second etched glass substrates 2 having normally refractive index of 1.52; in conventional art, substrate should be etched for cleaning.
- a liquid crystal layer 15 between the first and second etched substrates; and
- passivation films (protection coating) outside the first and second etched substrates (col.9, lines 24-43), this passivation films made of transparent silica having refractive index of 1.48 (1.48 about 10% difference of 1.52)

wherein

- injecting a liquid crystal between the first and second substrates, after forming the passivation film on the surface of the first and second substrates (claim 14).

The following features are conventional or well-known art:

- injecting a liquid crystal between the first and second substrates after assembling the first and second substrates with each other (claim 15).

Art Unit: 2871

- assembling the first and second substrates with each other includes a sealing pattern (claims 23 and 29).

However, Sekimura and the conventional art fail to disclose the passivation film made of BenzoCycloButten (BCB), which is organic material (claims 3, 7, 11 and 26).

Kennedy et al. teach (col. 2 lines 35-38) the passivation film made of BenzoCycloButten (BCB), which is organic material for imparting qualities of environmental or protection, chemical and solvent resistance, hydrolytic stability, lubricity, low dielectric, hydrostatic stability, weatherability, flame resistance, chemical resistance, hydrolytic stability, lubricity, environmental protection, scratch resistance, solvent resistance, surface passivation, water repellancy, lower surface refractive index, lower surface coefficient of friction, fluid barrier properties, oil repellancy, thermal stability, and/or reduced moisture pick-up.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify LCD device comprising as Sekimura and the conventional art disclosed with the passivation film made of BenzoCycloButten (BCB), which is organic material for imparting qualities of environmental or protection, chemical and solvent resistance, hydrolytic stability, lubricity, low dielectric, hydrostatic stability, weatherability, flame resistance, chemical resistance, hydrolytic stability, lubricity, environmental protection, scratch resistance, solvent resistance, surface

Art Unit: 2871

passivation, water repellancy, lower surface refractive index, lower surface coefficient of friction, fluid barrier properties, oil repellancy, thermal stability, and/or reduced moisture pick-up.

2. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekimura (US4505547) in view of Kennedy et al. (US5246782A) as claims 1-3, 5-7, 9-11, 14-15, 23-26 and 29 above, in further view of Walters et al. (US6150430A).

Sekimura and Kennedy et al. fail to disclose the features in claim 12.

Walter et al. teach (col. 2 lines 40-45 and col. 8 lines 39-46) the organic film is formed by a spin coating process for preparing a thin organic film.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify LCD device Sekimura disclosed with teach the organic film is formed by a spin coating process for preparing a thin organic film.

2. Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekimura (US4505547) in view of Kennedy et al. (US5246782A) as claims 1-3, 5-7, 9-11, 14-15, 23-26 and 29 above.

Sekimura and Kennedy et al. fail to disclose the features in claims 16-20.

It is well-known in the art for LCD to comprise:

- polishing the surface of the first and second substrates after etching a surface of at least one of the first and second substrates for cleaning, smooth and flatting surface of substrates (claim 16).
- polishing (grinding) includes mechanically polishing the assembled substrates while spraying coolant on the assembled substrates for cleaning, smooth and flatting surface of substrates (claim 17).
- mechanically polishing includes polishing with sandpaper; mechanically polishing includes polishing with a polisher for cleaning, smooth and flatting surface of substrates. They are steps includes in grinding step (claims 18-19).
- the etching includes dipping the substrate into an etchant (claim 20) for cleaning, smooth and flatting surface of substrates.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify LCD device as Sekimura disclosed with the features of claims 16-20 for cleaning, smooth and flatting surface of substrates.

3. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekimura (US4505547) in view of Kennedy et al. (US5246782A) as claims 16-20 above, in further view of Dob (US20020079289A1).

Sekimura and Kennedy et al. fail to disclose the features in claims 21-22.

Dob teaches the etchant is an HF solution by exothermic reaction between the glass substrate and the etchant for uniformly etching the surface of the glass substrate.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify LCD device as Sekimura disclosed with the etchant is an HF solution by exothermic reaction between the glass substrate and the etchant for uniformly etching the surface of the glass substrate.

3. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekimura (US4505547) in view of Kennedy et al. (US5246782A) as claims 1-3, 5-7, 9-11, 14-15, 23-26 and 29 above.

Sekimura and Kennedy et al. fail to disclose the features in claims 28.

It is well-known in the art that the TFT built in the passive-type LCD device for improving image quality with changing into active-type LCD device, wherein TFT including gate electrode and source and drain electrodes on the substrate.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify LCD device as Sekimura disclosed with TFT built in the passive-type LCD device for improving image quality with changing into active-type LCD device, wherein TFT including gate electrode and source and drain electrodes on the substrate.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (571) 272-2296. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HOAN C. NGUYEN
Examiner
Art Unit 2871

chn


DUNG T. NGUYEN
PRIMARY EXAMINER